

Retrofitting Cartridge Style Pulse-Jet Dust Collectors

95% of all existing dust collectors are retrofit candidates.



- **Increase efficiency** and lowers the particulate emissions coming from the dust collector. Meet legal and process requirements.
- **Increase cartridge life** 3 to 10 times.
- **Lower Operating cost by 30-60%**. Use ½ the current number of filter cartridges.
- A very **attractive payback**, future servicing costs can be 1/4 of the current cost.
- **Lower power consumption by 20-40%** by lowering the operating pressure of the collector.
- Upgrade to the **best available technology**.
- **Increase collector capacity** up to 75% by keeping current number of cartridges and upgrading the pulse cleaning system.
- **Most economical approach**, usually purchased in operating rather than capital budgets to make project approval very fast.
- **No risk**. Modifications installed and running before invoice is due. No special requirements or training required. Modifications are performed by your own maintenance or bag changing crews. No permanent changes to the collector, it can be restored to original state.

Symptoms to look for:

- A. Operating pressure drop more than 3 inches water column and high compressed air usage.
- B. On tandem cartridge sets dust piles up on upper sections of cartridges.
- C. Cartridge life less than 12 months.
- D. Pressure drop increases in increments of less than 0.1 inches regularly. Increased pressure drop may be due to refrigeration cycle of compressed air as it expands.
- E. Operating weight of cartridge more than four pounds over the weight of a new cartridge filter.
- F. Leakage through filters hard to detect since pressure drop is normal. Results in short filter life.
- G. Noisy Cleaning System especially on metal fumes.
- H. Dust build up in horizontal duct runs.

The Problem: There are serious flaws in equipment design by all major cartridge dust collector suppliers. Certain basic laws of physics and air dynamics were not considered in their product development. The main design flaw of continuous cleaning collectors is that it is believed by designers that volume (flow in CFM) per filter element is solely a function of filter area. The truth is that it is related to cleaned filter area.

The Solution: QAM's exclusive Retrofit Service and apply ten year old proven advanced technology to the conventionally designed dust collectors. There are over retrofitted 500 units in service. Alternatively, purchase one of the very few well designed advanced technology dust collector systems available today.

Problems to Correct:

- ❖ Poor Performance; dust penetration through cartridges, high pressure drop, frequent filter replacements.
- ❖ Poor cartridge filter design; leaking, plugging (or blinding), excessive bridging, tears and ruptures.
- ❖ Poor inlet position and air distribution; inefficient cleaning of cartridges, abrasion problems, excessive dust loading.
- ❖ Poor air volume or pressure to the pulse pipe; air-jet does not properly clean the cartridge, as little as only 10% of the filter gets cleaned.
- ❖ Excessive use of compressed air to properly clean the cartridges.
- ❖ Condensation in the filter cake; caused by cooling of cleaning air jet, which adversely affects media permeability.
- ❖ Dust hanging up in the cartridges.